

## **Parts Manual**

Transfer Switch 300/400/600 Amps

OTPCC (Spec A)

#### MODEL IDENTIFICATION

This catalog covers models produced under the  $Cummins^{@}/Onan^{@}$  and Cummins Power Generation brand names.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Cummins Power Generation nameplate.

For handy reference, insert your nameplate information in the spaces below.

MODEL AND SPEC NO.

SERIAL NO.

DIGITAL CONTROL SOFTWARE VERSION AND DATE (IF APPLICABLE)

## SAFETY PRECAUTIONS

The following symbols are used in Cummins Power Generation manuals to alert users to the potentially dangerous conditions relating to maintenance of equipment and replacement of parts. Please read and observe.

**▲ DANGER** 

This symbol warns of immediate hazards which will result in severe personal injury or death.

**△**WARNING

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

**△CAUTION** 

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or product or property damage.

## PRODUCT SAFETY PRECAUTIONS

**△WARNING** 

Service and repair of Cummins Power Generation equipment must be performed by trained, experienced personnel only. Improper service or repair may result in property damage, severe personal injury or death. Do not use this catalog as a guide to servicing your equipment. Read and follow the IMPORTANT SAFETY INSTRUCTIONS in the Service Manual appropriate for the equipment you are working on.

**△WARNING** 

Contact with USED ENGINE OILS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.

**△WARNING** 

Contact with ASBESTOS has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!

**△WARNING** 

Contact with BENZINE and LEAD, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA state agencies as causing CANCER or REPRODUCTIVE TOXICITY. When checking, draining or adding gasoline and fuel additives or using solvents take all necessary precautions not to ingest, breathe the fumes or contact the liquids. Use adequate ventilation and wear protective gloves, masks and protective clothing!

## Introduction

This catalog applies to the OTPC 300/400/600 Amp Transfer Switch. Each illustrated part is identified by a reference number corresponding to the same reference number in the parts list for that group. Parts illustrations are typical. Using the model and spec number from the switch box nameplate, select the parts that apply to your Transfer Switch. Unless otherwise noted in the parts description, parts are interchangeable between models.

## **Feature Options**

Code	Description	Code	Description
A028	3-Pole Switch	L202	Auxiliary Relay - Emergency Position - 12 VDC
A029	4-Pole Switch	L203	Auxiliary Relay - Normal Position - 12 VDC
A035	Utility to Generator Set Applications	L204	Auxiliary Relay - Generator Start - 12 VDC
A036	Utility to Utility Applications	M003	Terminal Block – 30 Points
A037	Generator Set to Generator Set Applications	M007	Load Shed - From Emergency
A041	One Phase – 2 or 3 wire	M017	Security - Front Panel
A042	Three Phase – 3 or 4 wire	M018	Display – Digital
A044	Frequency – 60 Hz	M020	Communications – Lonworks
A045	Frequency – 50 Hz	M022	Monitoring – Load
A046	Listing – UL	M023	Module – Relay Signal
A064	Listing – UL/NFPA-20	N002	Terminal Block – Battery Charger Alarms
B001	Cabinet – Type 1	N009	Bus Stubs Connection
B002	Cabinet – Type 3R	N013	Harness – Extension
B003	Cabinet – Type 4	R020	Voltage – 120
B004	Construction – Open	R021	Voltage – 208
B010	Cabinet – Type 12	R022	Voltage – 220
C023	Control – Level 1	R023	Voltage – 240
C024	Control – Level 2	R024	Voltage – 380
D009	Meters - Bar Graph Display	R025	Voltage – 416
K001	Battery Charger – 2 Amp, 12/24V	R026	Voltage – 480
K002	Battery Charger – 10 Amp, 12V	R027	Voltage - 600
K003	Battery Charger – 10 Amp, 24V	R035	Voltage – 440
L101	Auxiliary Relay – 24 VDC Coil	R038	Voltage – 190
L102	Auxiliary Relay - Emergency Position - 24 VDC	S052	Current Rating – 300 Amps
L103	Auxiliary Relay - Normal Position - 24 VDC	S053	Current Rating – 400 Amps
L104	Auxiliary Relay - Generator Start - 24 VDC	S054	Current Rating – 600 Amps
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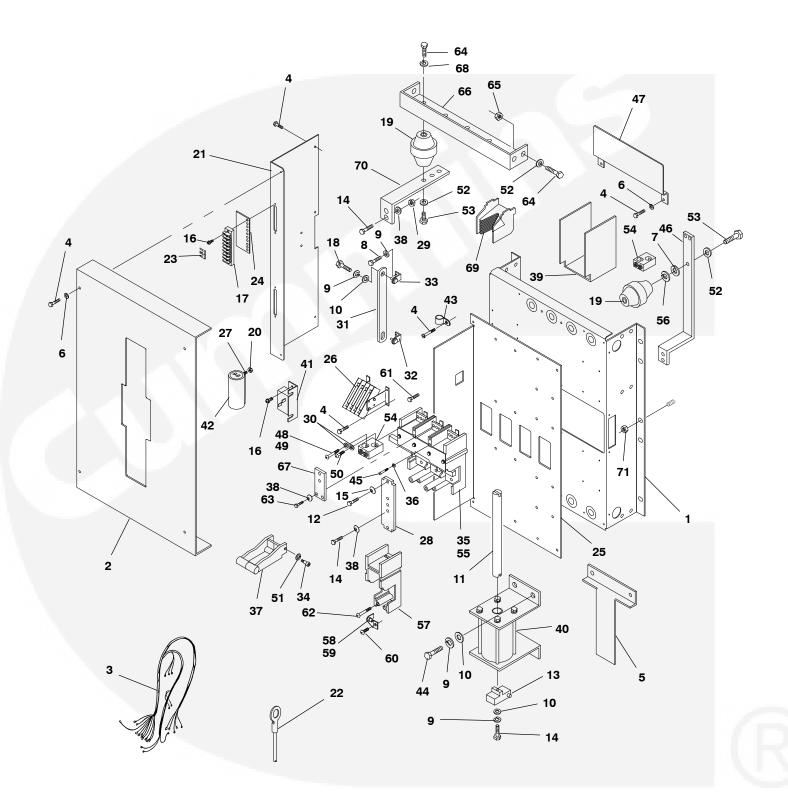
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## **Abbreviations**

Some of the following abbreviations may be used throughout this Parts Catalog:

AC Alternating Current MCM	Metric Circular Mils
Amp Ampere mm	Millimeter
A/R As Required MOH	Mobile Off Highway
AVR Automatic Voltage Regulator NFS	Not For Sale
AWG American Wire Gauge NPT	National Pipe Thread
CSA Canadian Standard OD	Outside Diameter
	Ourside Diameter Ounce
DC Direct Current PCB	Printed Circuit Board
Deg. Degree Ph	Phase
EFC Electronic Fuel Control PMG	Permanent Magnet Generator
EIT External/Internal Tooth PT/CT	Potential Transformer/
EPROM Erasable Programmable	Current Transformer
Read Only Memory RFI	Radio Frequency Interference
ET External Tooth RT	Right
GFI Ground Fault Interrupter Spec	Specification
ID Inside Diameter Thk	Thick
IEC International Electrotechnical UL	Underwriters Laboratories Inc.
Commission UNC	Union National Coarse
IT Internal Tooth UNF	Union National Fine
kW Kilowatt VAC	Volts Alternating Current
	Volts Direct Current
LT Left W/(ET, I	T, EIT) With
M(meter number) Meter	

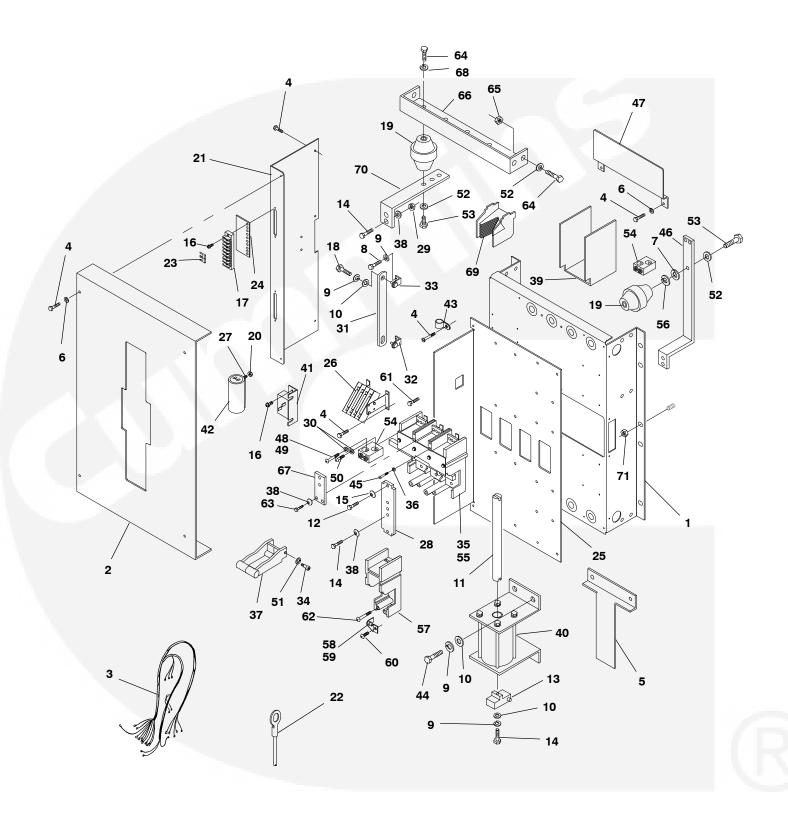




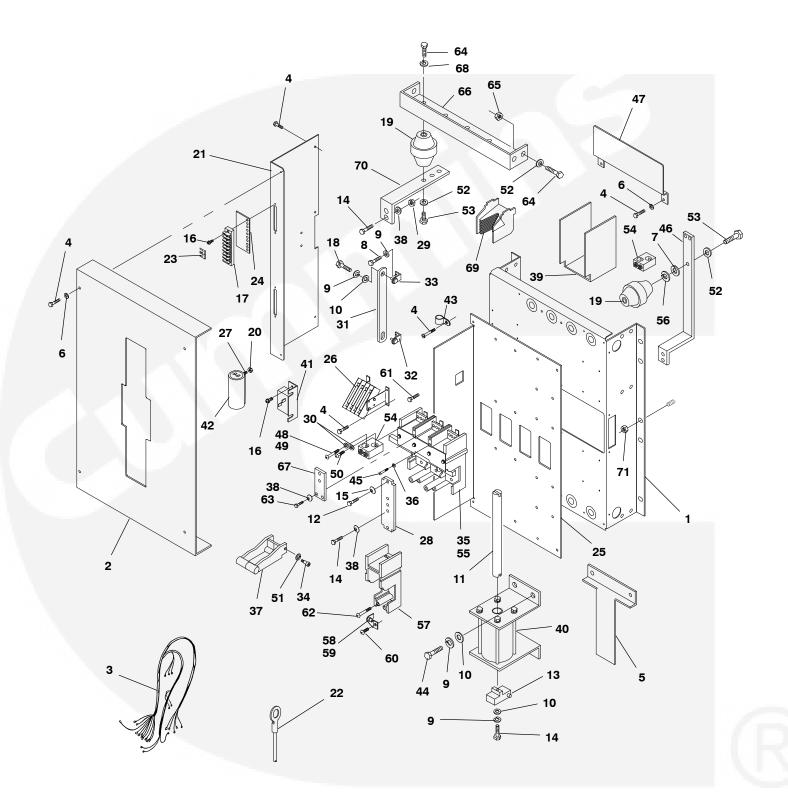
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION	
			Transfer Switch Assembly 3-Pole, Front Connect with Mechanical Lugs				3-Pole, Rear Connec Bus Stubs <b>300 Amp</b>	ct with
			300 Amp		306-4410-01	1	120 VAC	
	306-4408-01	1	120 VAC		306-4410-02	1	190 VAC	
	306-4408-02	1	190 VAC		306-4410-03		208/600* VAC	
	306-4408-03	1	208/600* VAC		306-4410-04	1	220/240 VAC	
	306-4408-04		220/240 VAC		306-4410-05		380/416 VAC	
	306-4408-05	1	380/416 VAC		306-4410-06	1	440/480 VAC	
	306-4408-06	1	440/480 VAC				400 Amp	
			400 Amp		306-4410-07	1	120 VAC	
	306-4408-07	1	120 VAC		306-4410-08	1	190 VAC	
	306-4408-08	1	190 VAC		306-4410-09	1	208/600* VAC	
	306-4408-09	1	208/600* VAC		306-4410-10	1	220/240 VAC	
	306-4408-10	1	220/240 VAC		306-4410-11	1	380/416 VAC	
	306-4408-11	1	380/416 VAC		306-4410-12	1	440/480 VAC	
	306-4408-12	1	440/480 VAC				600 Amp	
			600 Amp		306-4410-13	1	120 VAC	
	306-4408-13	1	120 VAC		306-4410-14	1	190 VAC	
	306-4408-14	. 1	190 VAC		306-4410-15	1	208/600* VAC	
	306-4408-15	1	208/600* VAC		306-4410-16	1	220/240 VAC	
	306-4408-16	1	220/240 VAC		306-4410-17	1	380/416 VAC	
	306-4408-17	1 1	380/416 VAC		306-4410-18	1	440/480 VAC	
	306-4408-18	1	440/480 VAC				4-Pole, Rear Connec	ct with
			4-Pole, Front Connect with				Bus Stubs	
			Mechanical Lugs				300 Amp	
			300 Amp		306-4411-02	1	190 VAC	
	306-4409-02	1	190 VAC		306-4411-03	1	208/600* VAC	
	306-4409-03	1	208/600* VAC		306-4411-04	1	220/240 VAC	
	306-4409-04	. 1	220/240 VAC		306-4411-05	1	380/416 VAC	
	306-4409-05	1	380/416 VAC		306-4411-06	1	440/480 VAC	
	306-4409-06	: 1	440/480 VAC				400 Amp	
			400 Amp		306-4411-08	1	190 VAC	
	306-4409-08	1	190 VAC		306-4411-09	1	208/600* VAC	
	306-4409-09	1	208/600* VAC		306-4411-10	1	220/240 VAC	
	306-4409-10	1	220/240 VAC		306-4411-11	1	380/416 VAC	
	306-4409-11	1	380/416 VAC		306-4411-12	1	440/480 VAC	
	306-4409-12	1	440/480 VAC				600 Amp	
			600 Amp		306-4411-14	1	190 VAC	
	306-4409-14	. 1	190 VÁC		306-4411-15	1	208/600* VAC	
	306-4409-15	1	208/600* VAC		306-4411-16	1	220/240 VAC	
	306-4409-16	1	220/240 VAC		306-4411-17		380/416 VAC	
	306-4409-17	1	380/416 VAC		306-4411-18	1	440/480 VAC	
	306-4409-18	1	440/480 VAC					

Switch is actually 208 volts – A large transformer in the system reduces the 600 volt system voltage down to 208 volts.

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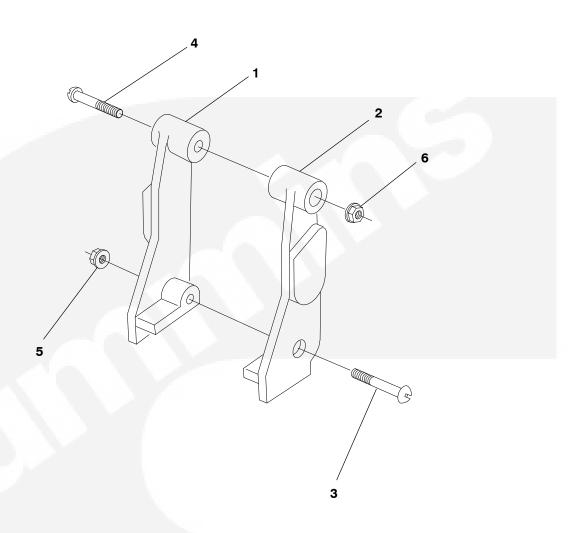


REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
Con	tinued			27	815-0029	4	Screw, Flat Head - Cross Recessed (#10-32 x .50)
1	306-3415	1	Base, Mounting	28			Strap, Jumper
2	306-4270	1	Cover, Labeled		337-1941	3	3-Pole
3	338–3792	1	Harness, Wiring		337–1941	4	4-Pole
4			Screw, Hex Head - Slotted -	29			Nut, Hex (1/4-20)
			W/IT (#10-32 x .50)		862-0001	6	3-Pole
	815-0652	23	3-Pole, Front Connect		862-0001	8	4-Pole
	815-0652	25	4-Pole, Front Connect	30			Washer, Lock (1/4)
_	815-0652	19	Rear Connect		850-0039	18	3-Pole, Front Connect
5	306-2340	2	Barrier		850-0039	24	4-Pole, Front Connect
6			Washer, Flat (#10)	31	306–3107	1	Bar, Interlock
	526-0008	8	3-Pole, Front Connect	32	306-0510	1	Arm, Interlock
	526-0008	10	4-Pole, Front Connect	33	306-0509	1	Arm, Interlock
_	526-0008	4	Rear Connect	34	815–0485	4	Screw, Shoulder (#10-32)
7			Washer, Lock – W/ET (3/8)	35			Block and Cross Bar Assembly
	853-0018	3	3-Pole, Front Connect		000 0444 00		- Emergency
_	853-0018	4	4-Pole, Front Connect		306-3414-02		3-Pole
8	800-0002	2	Screw, Cap – Hex Head		306-3414-04		4-Pole
_			(1/4-20 x .38)	36	526-2081	8	Washer, Flat
9	850-0040	10	Washer, Lock (1/4)	37	306–1372	2	Handle, Actuator (See
10	526-0018	8	Washer, Flat (1/4)				Separate Page For
11	306–3424	1	Rod, Actuator	00			Components)
12			Screw, Cap – Hex Head	38	054 0007	40	Washer, Spring – Conical (1/4)
	000 0000	•	(5/16–18 x 1.00)		851-0027	12	3-Pole, Front Connect
	800-0028	6	3-Pole		851-0027	16	4-Pole, Front Connect
10	800-0028	8	4-Pole		851-0027	24	3-Pole, Rear Connect
13 14	306-3400-0	2 2	Rod-End, Actuator	39	851–0027	32	4-Pole, Rear Connect
14			Screw, Cap – Hex Head	39	206 2002	4	Barrier, Lug
	800-0008	8	(1/4–20 x 1.25) 3-Pole		306–3893 306–3893	1 2	3-Pole, Front Connect 4-Pole, Front Connect
	800-0008	10	4-Pole	40	300-3693	2	Actuator, Linear
15	000-0000	10	Washer, Spring – Conical (5/16)	40	306-3109	1	120 VAC
13	851-0028	6	3-Pole		306-3110	1	190 VAC
	851-0028	8	4-Pole		306-3111	1	208/600 VAC
16	815-0651	6	Screw, Round Head - Cross		306–3112	1	220/240 VAC
10	010 0001	· ·	Recessed (#6–32 x .75)		306-3114	1	380/416 VAC
17	332-2832	2	Block, Terminal		306–3115	i	440/480 VAC
18	800-0003	2	Screw, Hex Head (1/4–20 x	41	000 0110	•	Breaker, Circuit
		_	.50)	• • •	320-0613	1	120 VAC
19			Standoff, Insulator		320-0611	1	190/208/220/240/600 VAC
	332-2512	3	3-Pole, Front Connect		320-0609	1	380/416 VAC
	332-2512	4	4-Pole, Front Connect		320-0608	1	440/480 VAC
	332-2512	3	Rear Connect	42	0_0 0000	•	Capacitor
20	870-0131	4	Nut, Hex - W/ET (#10-32)		312-0239	1	120 VAC
21	306-3418	2	Bracket, Terminal		312-0218	1	190/208/600 VAC
22	226-3380	1	Lead (380/416/440/480 VAC)		312-0206	1	220/240 VAC
23	332–2605	1	Jumper, Terminal		312-0204	2	380/416 VAC
24	332-2903	2	Strip, Marker		312-0236	2	440/480 VAC
25	306-3416	1	Barrier, Base	43	332-2542	1	Clamp, Cable
26	306–3417	2	Switch Assembly, Auxiliary		· <b>-</b>		,-,
	-		(See Separate Page For	Con	itinued		
			Components)				



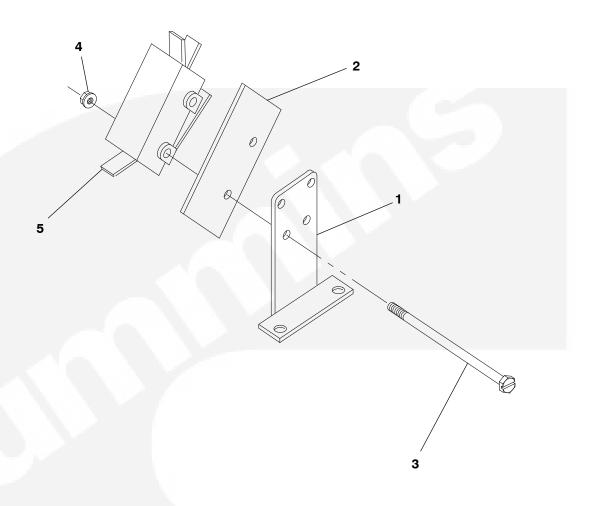
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
Con	tinued			55			Block and Cross Bar Assembly - Normal
44	800-0007	4	Screw, Cap – Hex Head (1/4–20 x 1.00)		306-3414-01 306-3414-03		3-Pole 4-Pole
45	815-0656	8	Screw, Round Head - Cross Recessed (1/4-20 x 2.75)	56	526-0030	3	Washer, Lock – W/ET (3/8) 3-Pole, Front Connect
46			Strap, Load		526-0030	4	4-Pole, Front Connect
	337-1940	3	3-Pole, Front Connect	57	306-3423	2	Block and Contact Assembly -
	337-1940	4	4-Pole, Front Connect				4-Pole
47		•	Cover, Lug	58	306-0384	1	Support (RH) – 4-Pole
	306-3899	1	3-Pole, Front Connect	59	306-0382	1	Support (LH) – 4-Pole
	306-3892	1	4-Pole, Front Connect	60	813-0142	2	Screw, Round Head - Crossed
48	200 2002	·	Screw, Pan Head (1/4–20 x 1.25)		0.00.12	_	Recessed – W/IT (#10–32 x .75) – 4-Pole
	822-0089	9	3-Pole, Front Connect – 300–400 Amp	61	815–0157	2	Screw, Set – Socket Head (#10-32 x 1/4) – 4-Pole
	822-0089	12	4-Pole, Front Connect – 300–400 Amp	62	815-0653	8	Screw, Round Head - Crossed Recessed (#10-32 x 1.75) -
49			Screw, Pan Head (1/4–20 x 1.50)	63			4-Pole Screw, Cap – Hex Head
	822-0091	9	3-Pole, Front Connect – 600 Amp		800-0005	12	(1/4–20 x .75) 3-Pole, Rear Connect
	822-0091	12	4-Pole, Front Connect –		800-0005	16	4-Pole, Rear Connect
			600 Amp	64	800-0048	7	Screw, Cap - Hex Head
50			Screw, Pan Head (1/4–20 x .62)			•	(3/8–16 x .75) – Rear Connect
	822-0085	9	3-Pole, Front Connect	65	862-0003	4	Nut, Hex (3/8-16) - Rear
	822-0085	12	4-Pole, Front Connect				Connect
51 52	850-0030	4	Washer, Lock (#10) Washer, Conical (3/8)	66	306-3505	1	Bracket, Support – Rear Connect
	851-0022	3	3-Pole, Front Connect	67			Strap, Normal and Emergency
	851-0022	4	4-Pole, Front Connect	•	337-2400	6	3-Pole, Rear Connect
	851-0022	3	Rear Connect		337-2400	8	4-Pole, Rear Connect
53	001 0022	J	Screw, Cap – Hex Head (3/8–16 x 1.0)	68	850-0050	7	Washer, Lock (3/8) – Rear Connect
	800-0050	3	3-Pole, Front Connect	69			Chute, Arc
	800-0050	4	4-Pole, Front Connect	09	306-3030	2	4-Pole, Front Connect
	800-0050	3	Rear Connect		306–3030	3	4-Pole, Rear Connect
54			Lug, Solderless	70			Strap, Load
	332–2704	12	300/400 Amp – Front		337–2399	3	3-Pole, Rear Connect
	332-2660	12	Connect 600 Amp – Front Connect	71	337–2399 870–0281	4 6	4-Pole, Rear Connect Nut, Lock (3/8-16)

## **Actuator Handle Assembly**



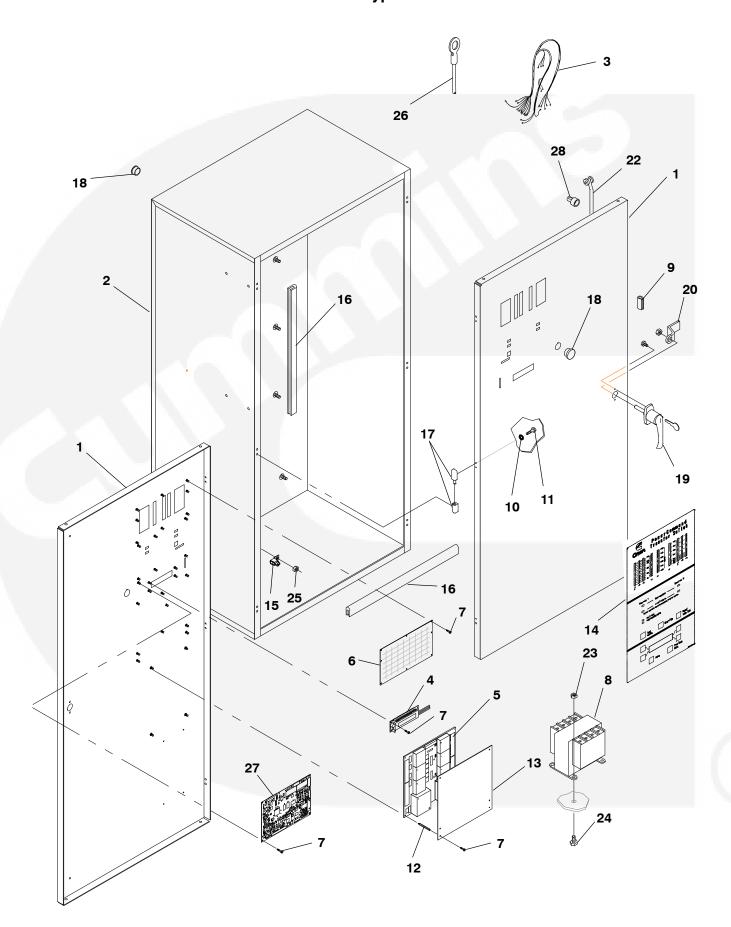
REF NO.		QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1 2	306–1372 306–1342 306–1341	2 1 1	Handle Assembly, Actuator Handle, Switch – Left Hand Handle, Switch – Right Hand	4	815-0933	1	Screw, Machine – Round Head – Cross Recessed (#10-32 x 1-3/4)
3	815-0932	1	Screw, Machine – Round Head – Cross Recessed (#8–32 x 2-1/4)	5 6	870–0235 870–0298	1	Nut, Self-Locking (#8–32) Nut, Self-Locking (#10–32)

## **Auxiliary Switch Assembly**



REF	PART	QTY	PART	REF	PART	QTY	PART
NO.	NO.	USED	DESCRIPTION	NO.	NO.	USED	DESCRIPTION
1 2	306-3417 306-3420 306-3391 815-0686	2 2 5 2	Switch Assembly, Auxiliary Bracket, Switch – Auxiliary Barrier, Switch Screw, Cap – Hex Head (#6–32 x 3-1/4)	4 5	870–0201 309–0393	2 4	Nut, Lock (#6-32) Switch, Snap-Action

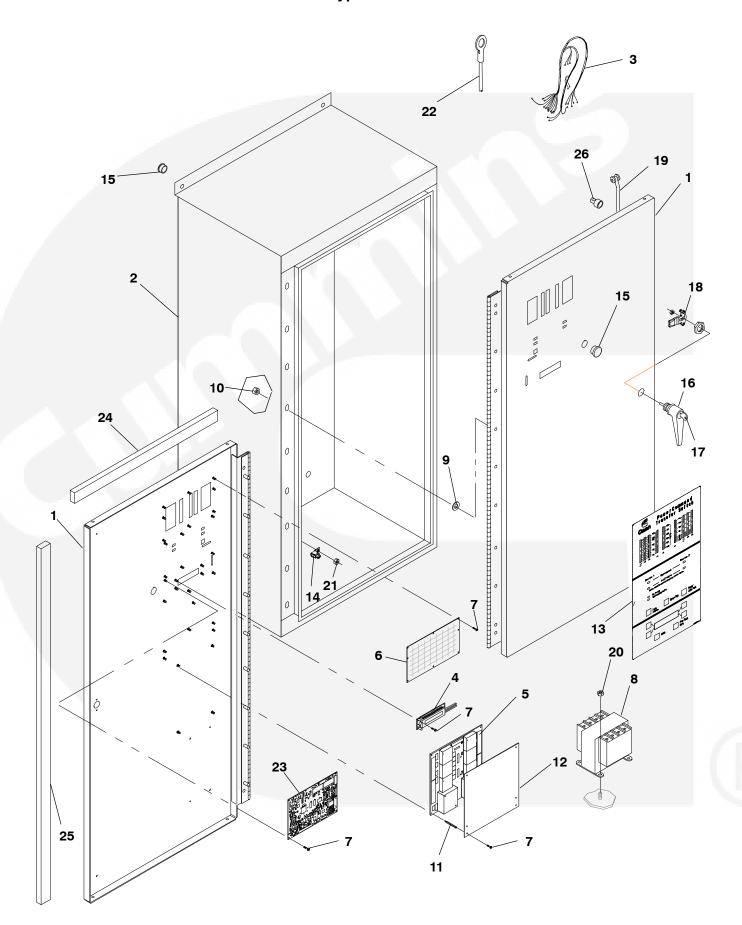
Cabinet Type 1



## Cabinet Type 1

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-3885-02	1	Door, Cabinet	11	800-2000	12	Screw, Cap - Hex Head
2	319-3884-02	1	Cabinet				(M5 x 8)
3			Harness, Main	12	870-2216	4	Standoff, Male Snap
			Level 1 Control	13	306-4523	1	Cover, Printed Circuit Board
	338-3854	1	All Except 600 VAC	14			Membrane, Panel
	338-3856-02	1	600 VAC				Level 1 Control
			Level 2 Control		300-5185	1	Without Digital Display
	338-3855-01	1	All Except 600 VAC		300-5186	1	With Digital Display
	338-3857-02	1	600 VAC				Level 2 Control
			Generator to Generator		300-5186	1	Without Meters-Bar Graph
			Applications				Display
	338-3855-02	1	All Except 600 VAC		300-5271	1	With Meters-Bar Graph
	338-3857-04	1	600 VAC				Display
4	300-5151	1	Module, Digital Display	15	332-3653	1	Lug, Solderless (3/8")
5			Board, Printed Circuit - Power	16	508-1045	3	Edge, Protection
			Module	17	406-0810	3	Block, Hinge
			Level 1 Control	18	517-0135	4	Plug, Hole
	300-5148-01	1	120 VAC	19	406-0809	1	Handle, Locking (Includes
	300-5148-02	1	208/220/240/480				Hardware and 2 Keys)
			VAC	20	406-0934	1	Latch, Cam (3 Point)
	300-5148-03		600 VAC	21	517-0137	1	Plug, Hole
	300-5148-04	1	190/380/416 VAC	22	306-3468-02	2	Rod, Roller
			Level 2 Control	23	870-0212	4	Nut, Self-Locking (1/4–20)
	300-5149-05		120 VAC	24	800-0003	4	Screw, Cap - Hex Head
	300-5149-06	1	208/220/240/440/480				(1/4-20 x .50)
			VAC	25	870-0281	1	Nut, Lock (3/8-16)
	300-5149-07		600 VAC	26			Lead (Quantity Used as
	300-5149-08		190/380/416 VAC				Required)
6	300-5180	1	Board, Printed Circuit – Bar		226-3554-01	1	6.0"
			Graph		226-3554-02		3.0"
7	815-0959-03		Screw, Pan Head (M3 x 8)	27		1	Board, Printed Circuit - Digital
8	315-0661	1	Transformer, Power (600 VAC		300-5146	1	Level 1 Control
			Only)		300-5147-01	1	Level 2 Control
9	508-1114	4	Edge, Protection	28	306–3467	2	Guide, Rod
10	853-2005	12	Washer, Lock - W/ET (M5)				

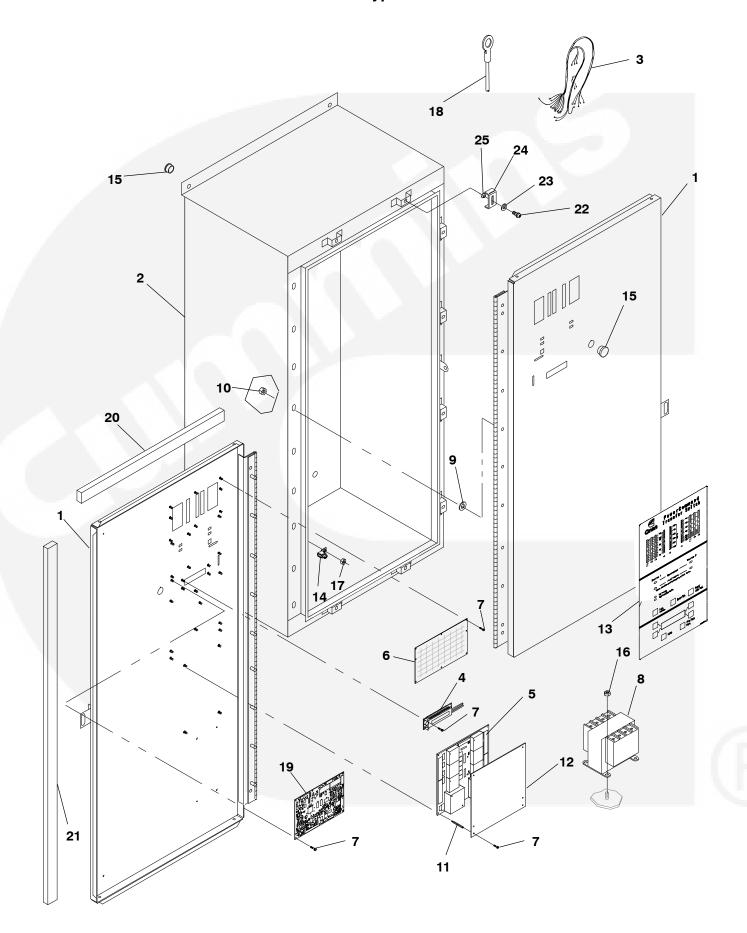
Cabinet Type 3R and 12



## Cabinet Type 3R and 12

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1 2	319-3888-02	1	Door, Cabinet Cabinet	8	315-0661	1	Transformer, Power (600 VAC Only)
	319-3887-03	1	Type 3R Cabinet	9	508-0233	9	Washer, Rubber
	319-3887-04	1	Type 12 Cabinet	10	870-0131	9	Nut, Hex - W/ET (#!0-32)
3			Harness, Main	11	870-2216	4	Standoff, Male Snap
			Level 1 Control	12	306-4523	1	Cover, Printed Circuit Board
	338-3854	1	All Except 600 VAC	13			Membrane, Panel
	338-3856-02	1	600 VAC				Level 1 Control
			Level 2 Control		300-5391	1	Without Digital Display
	338-3855-01	1	All Except 600 VAC		300-5392	1	With Digital Display
	338-3857-02	1	600 VAC				Level 2 Control
			Generator to Generator Applications		300-5392	1	Without Meters-Bar Graph Display
	338-3855-02	1	All Except 600 VAC		300-5393	1	With Meters-Bar Graph
	338-3857-04	1	600 VAC				Display
4	300-5151	1	Module, Digital Display	14	332-3653	1	Lug, Solderless (3/8")
5			Board, Printed Circuit - Power	15	517-0266	5	Plug, Hole
			Module	16	406-0613	1	Handle, Door (Includes Key)
			Level 1 Control	17	406-0649	1	Key, Replacement
	300-5148-01	1	120 VAC	18	306-3525	1	Latch, Cam (3 Point)
	300-5148-02	1	208/220/240/440/480	19	306-3526-03	2	Rod, Roller
			VAC	20	870-0212	4	Nut, Self-Locking (1/4–20)
	300-5148-03	1	600 VAC	21	870-0281	1	Nut, Lock (3/8-16)
	300-5148-04	1	190/380/416 VAC	22			Lead (Quantity Used as
			Level 2 Control				Required)
	300-5149-05		120 VAC		226-3554-01	1	6.0"
	300-5149-06	1	208/220/240/440/480		226-3554-02	1	3.0"
			VAC	23		1	Board, Printed Circuit - Digital
	300-5149-07	1	600 VAC		300-5146	1	Level 1 Control
	300-5149-08	1	190/380/416 VAC		300-5147-01	1	Level 2 Control
6	300-5180	1	Board, Printed Circuit - Bar	24	895-0293-07	2	Gasket, Door
			Graph	25	895-0293-08	2	Gasket, Door
7	815-0959-03	26	Screw, Pan Head (M3 x 8)	26	306-3467	2	Guide, Rod

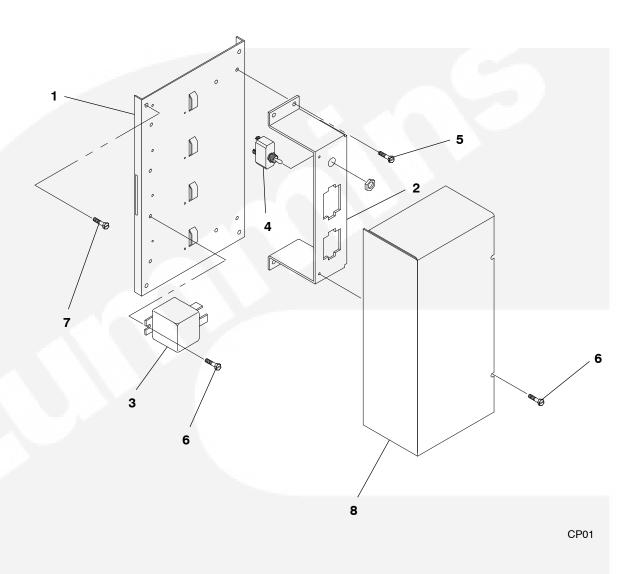
Cabinet Type 4



## Cabinet Type 4

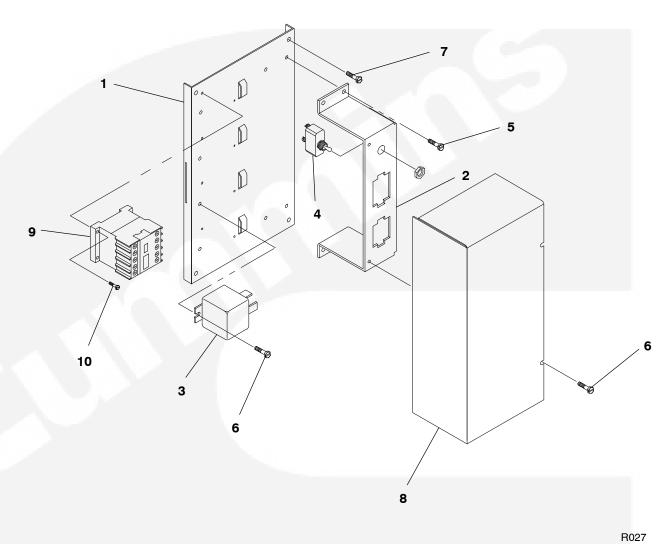
REF NO.		QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-3891-02	1	Door, Cabinet	9	508-0233	9	Washer, Rubber
2	319-3890-02		Cabinet	10	870-0131	9	Nut, Hex - W/ET (#!0-32)
3			Harness, Main	11	870-2216	4	Standoff, Male Snap
			Level 1 Control	12	306-4523	1	Cover, Printed Circuit Board
	338-3854	1	All Except 600 VAC	13			Membrane, Panel
	338-3856-02	1	600 VAC				Level 1 Control
			Level 2 Control		300-5391	1	Without Digital Display
	338-3855-01	1	All Except 600 VAC		300-5392	1	With Digital Display
	338-3857-02	1	600 VAC				Level 2 Control
			Generator to Generator		300-5392	1	Without Meters-Bar Graph
	000 0055 00	_	Applications		000 5000		Display
	338-3855-02	1	All Except 600 VAC 600 VAC		300-5393	1	With Meters-Bar Graph
4	338-3857-04	1		4.4	000 0050		Display
4	300–5151	ı	Module, Digital Display	14	332–3653	1	Lug, Solderless (3/8")
5			Board, Printed Circuit – Power	15	517-0266	5	Plug, Hole
			Module Level 1 Control	16 17	870-0212 870-0281	4 1	Nut, Self-Locking (1/4–20)
	300-5148-01	1	120 VAC	18	870-0281	ı	Nut, Lock (3/8–16)
	300-5148-02	1	208/220/240/440/480	10			Lead (Quantity Used as Required)
	300-3146-02	1	VAC		226-3554-01	1	6.0"
	300-5148-03	1	600 VAC		226-3554-01		3.0"
	300-5148-03	1	190/380/416 VAC	19	220-3334-02	1	Board, Printed Circuit – Digital
	300-3146-04		Level 2 Control	19	300-5146	1	Level 1 Control
	300-5149-05	1	120 VAC		300-5147-01	=	Level 2 Control
	300-5149-06	1	208/220/240/440/480	20	895-0293-07		Gasket. Door
	300-3149-00		VAC	21	895-0293-07		Gasket, Door
	300-5149-07	1	600 VAC	22	812-0177	8	Screw, Round Head (5/16–18 x
	300-5149-08	1	190/380/416 VAC	22	012-0177	U	.75)
6	300-5180	i	Board, Printed Circuit – Bar	23	526-0022	8	Washer, Flat (5/16)
J	000 0100	•	Graph	24	301-6727	8	Bracket, Door
7	815-0959-03	26	Screw, Pan Head (M3 x 8)	25	406-0519	8	Spring, Conical
8	315-0661	1	Transformer, Power (600 VAC	_0	.00 0010	J	epinig, comoai
J	0.0 0001	•	Only)				
			J,				

# Accessory Control Plate (Less than 600 Volt)



REF NO.		QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-3940-02	1	Plate, Relay	6	815-0792-02	5	Screw, Pan Head - Crossed
2	319-3941-02	1	Bracket, Connector				Recessed (M4 x 8)
3	307-2929	3	Relay – 3PDT (K1, K2, and K3)	7	815-0960-04	4	Screw, Pan Head - Crossed
4	308-0406	1	Switch, Toggle				Recessed (M4 x 12)
5	815-0955-03	4	Screw, Phillips/Hex Head – GND (M4 x 10)	8	319-3942-02	1	Cover, Relay Plate

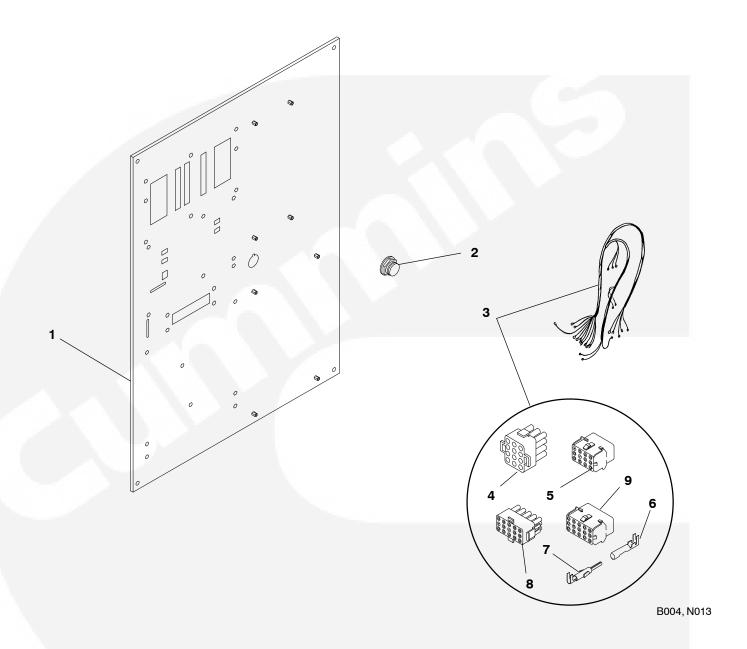
## Accessory Control Plate (600 Volt)



F	3	0	2

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1 2	319-3940-02 319-3941-02	-	Plate, Relay Bracket, Connector	7	815-0960-04	. 4	Screw, Pan Head – Crossed Recessed (M4 x 12)
3	307–2929	1	Relay – 3PDT	8	319-3942-02	. 1	Cover, Relay Plate
4	308-0406	1	Switch, Toggle	9	307-2931	2	Relay, Control
5	815-0955-03	4	Screw, Phillips/Hex Head – GND (M4 x 10)	10	815-0958-04	4	Screw, Pan Head – Cross Recessed (M3 x 12)
6	815-0792-02	3	Screw, Pan Head - Crossed Recessed (M4 x 8)				` '

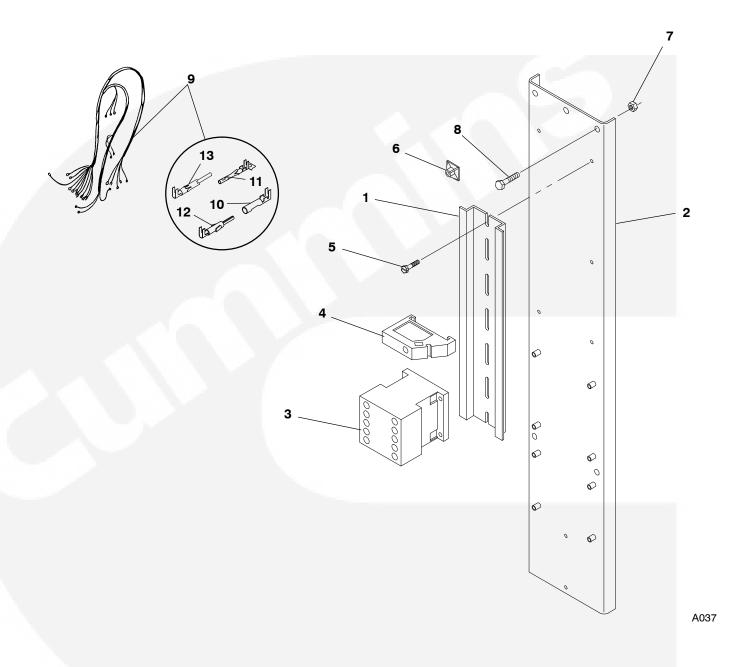
## Plate and Wiring Harness (Open Construction)



REF		QTY	PART	REF	PART	QTY	PART
NO.	NO.	USED	DESCRIPTION	NO.	NO.	USED	DESCRIPTION
1	319-4011-02	1	Plate, Open Construction	6			*# Socket, Contact
2	517-0266	1	Plug, Hole	_	323-1200	12	338–2219 Wiring Harness
3			Harness, Control (Optional)		323-1200	15	338-2220 Wiring Harness
	338-2219	1	With 12 Pin Connector	7			*# Pin, Contact
			(Includes Parts Marked *)		323-1199	12	338-2219 Wiring Harness
	338-2220	1	With 15 Pin Connector		323-1199	15	338-2220 Wiring Harness
			(Includes Parts Marked #)	8	323-1252	1	# Plug, Connector (15 Pin) (P1)
4	323-1314	1	* Plug, Connector (12 Pin) (P2)	9	323-1253	1	# Cap, Connector (15 Pin) (J1)
5	323-1315	1	* Cap, Connector (12 Pin) (J2)				

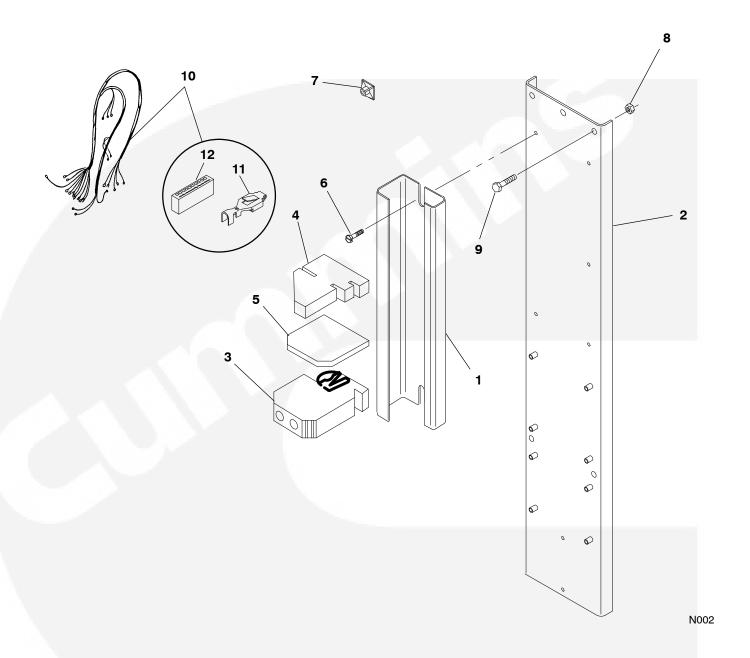
<sup>\* –</sup> Parts Included in 338–2219 Wiring Harness # – Parts Included in 338–2220 Wiring Harness

## Wiring Harness Battery Charger (Generator Set to Generator Set)



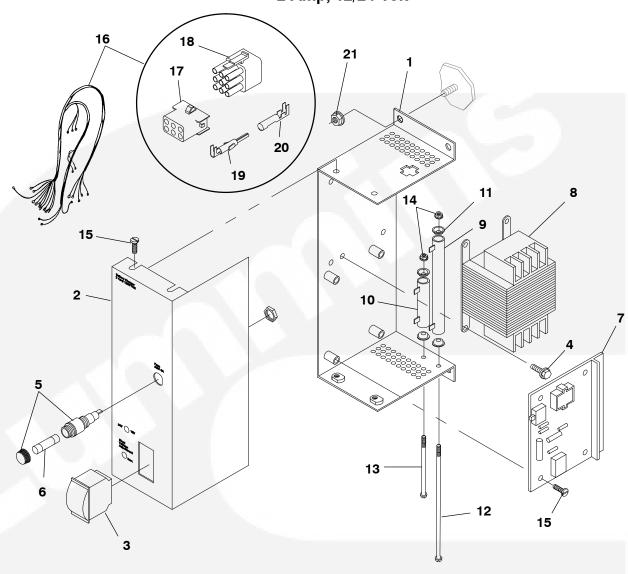
REF NO.		QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-2879-04	1	Rail, Terminal	9	338-3836	1	Harness, Battery Charger
2	319-3943	1	Plate, Mounting				(Includes Parts Marked *)
3	307-2873	1	Relay, Control (12 VDC)	10	323-1200	2	* Socket, Contact
4	332-2878	2	Bracket, End	11	332-3606	1	* Socket, Contact
5	815-0955-03	2	Screw, Phillips/Hex Head -	12	323-1199	2	* Pin, Contact
			GND (M4 x 10)	13	323-1703	2	* Pin, Contact
6	332-2420	2	Mount, Cable Tie				
7	870-0212	4	Nut, Self-Locking (1/4-20)	* – F	Parts Included	in 338-38	337 Wiring Harness
8	800-0005	4	Screw, Cap – Hex Head (1/4–20 x .75)				-

## **Battery Charger Alarm**



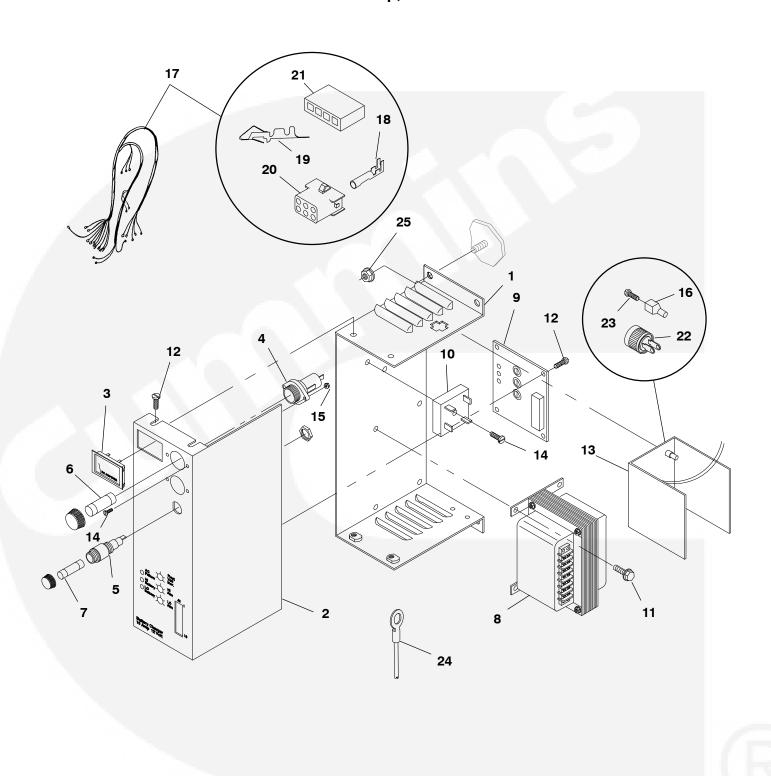
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-2837-09	1	Rail, Terminal Block	9	800-0005	4	Screw, Cap - Hex Head
2	319-3943	1	Plate, Mounting				(1/4-20 x .75)
3	332-2836-02	! 1	Block, Terminal (Sectional)	10	338-2350	1	Harness, Alarm (Includes Parts
4	332-2839	2	Bracket, End - Terminal				Marked *)
5	332-2841	1	Plate, End - Terminal	11	323-1302	9	* Pin, Contact (J2)
6	815-0955-03	2	Screw, Phillips/Hex Head -	12	323-1374-10	1	* Housing, Connector (10 Pin)
			GND (M4 x 10)				(J2)
7	332-2420	2	Mount, Cable Tie				,
8	870-0212	4	Nut, Self-Locking (1/4-20)	* – F	Parts Included in	n 338–23	349 Wiring Harness

Battery Charger 2 Amp, 12/24 Volt



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	301-9990	1	Wrapper, Charger – Battery	13	813-0112	1	Screw, Machine - Round Head
2	301-9991	1	Cover, Charger – Battery				(#10-32 x 2-1/2)
3	302-0807	1	Ammeter, DC	14	870–0131	2	Nut, Hex – W/ET (#10–32)
4	821–0040	4	Screw, Machine – Locking Head Slotted (#10-32 x 5/16)	15	815–0845	8	Screw, Pan Head – W/ET (#6–32 x 3/8)
5	321-0175	1	Holder, Fuse	16	338-2149	1	Harness, Wiring
6	321-0153	1	Fuse, 3 Amp				(Includes Parts Marked #)
7	300-2946	1	Board, Printed Circuit	17	323-1318	1	*Cap, 6 pin (J6)
8			Transformer	18	323-1291	1	*Plug, 9 pin (P9)
	315-0621-01	1	120 Volt	19	323-1199	A/R	*Pin, Terminal
	315-0621-02	1	208/240/480 Volt	20	323-1200	A/R	*Socket, Terminal
	315-0621-03	1	380/416 Volt	21	862-0026-5	53 4	Nut, Hex – W/ET (M5)
	315-0621-04	1	600 Volt				
9	304-0037	1	Resistor, Fixed	<b>.</b> .		l:- 000 04	40 \\/
10	304-0139	1	Resistor, Fixed	^ — F	arts included	i in 338–21	49 Wiring Harness
11	304-0015	4	Washer, Centering (7/32")				
12	813–0116	1	Screw, Machine - Round Head (#10-32 x 6-1/2)				

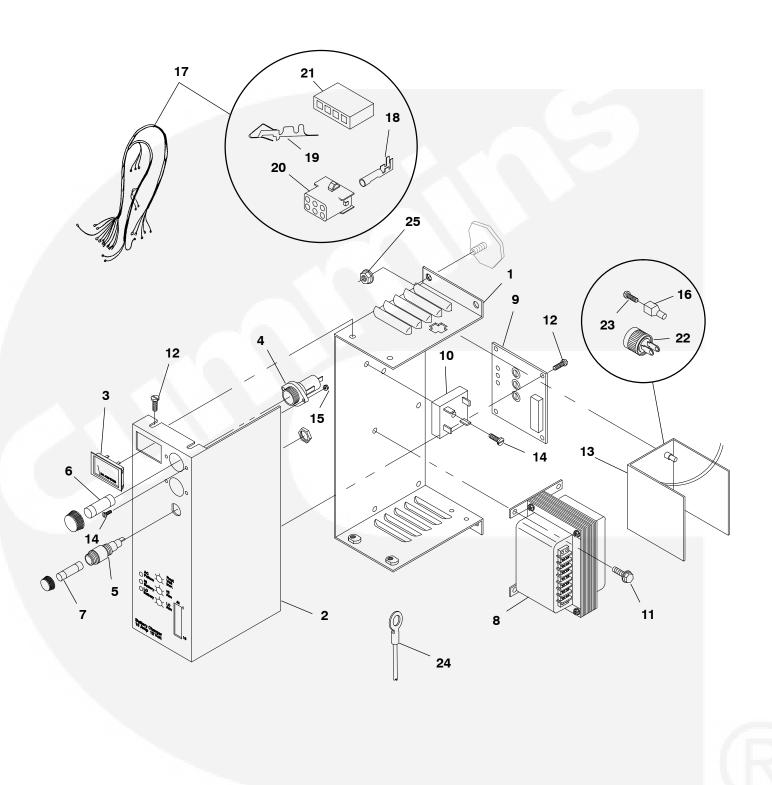
## Battery Charger 10 Amp, 12 Volt



## Battery Charger 10 Amp, 12 Volt

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-0072	1	Wrapper, Charger - Battery	9	300-3160	1	PCB, Charger - Battery
2	319-0073	1	Cover, Charger - Battery	10	305-0653	1	Rectifier, Bridge
3	302-1844	1	Ammeter, DC	11	821-0040	4	Screw, Machine - Locking Head
4	321-0237	2	Holder, Fuse (AC Input)				(#10-32 x 5/16)
5	321-0104	1	Holder, Fuse (DC Output)	12	815-0845	8	Screw, Pan Head - W/ET
6			Fuse				(#6-32 x 3/8)
			50 Hertz	13	305-0781	1	Rectifier Assembly - SCR
	321-0304-01	2	416/440 Volt				(12 Volt) (Includes Parts
	321-0304-02		380 Volt				Marked *)
	321-0304-03	2	240 Volt	14	815-0539	6	Screw, Pan Head - W/ET
	321-0304-04	- 2	220 Volt				(#8-32 x 5/8)
			60 Hertz	15	870-0221	5	Nut, Hex - W/ET (#8-32)
	321-0304-01	2	480 Volt	16	870-0263	4	*Nut, Insulated (#8)
	321-0304-02	2	380 Volt	17	338-2223	1	Harness, Battery Charger
	321-0304-03	2	240 Volt				(Includes Parts Marked #)
	321-0304-04	- 2	208 Volt	18	323-1200	A/R	#Socket, Terminal
	321-0304-05	2	120 Volt	19	323-1302	A/R	#Pin, Terminal
	321-0303-02	2	600 Volt	20	323-1318	1	#Cap, 6 pin
7	321-0127	1	Fuse (15 Amp)	21	323-1374-0	05 1	#Plug, 5 pin
8			Transformer	22	364-0003	1	*Rectifier, Gate (SCR)
			50 Hertz	23	809-0035	4	*Screw, Sheet Metal - Round
	315-0702	1	380 Volt				Head (#8 x 3/4)
	315-0704	1	220/416/440 Volt	24	226-3554-0	02 1	Lead (Quantity Used as
	315-0712	1	240 Volt				Required)
			60 Hertz	25	862-0026-	53 4	Nut, Hex – W/ET (M5)
	315-0700	1	120/208/240 Volt				
	315-0706	1	380 Volt				
	315-0708	1	480 Volt				223 Wiring Harness
	315–0710	1	600 Volt	* – F	Parts Included	l in 305–07	781 Rectifier Assembly

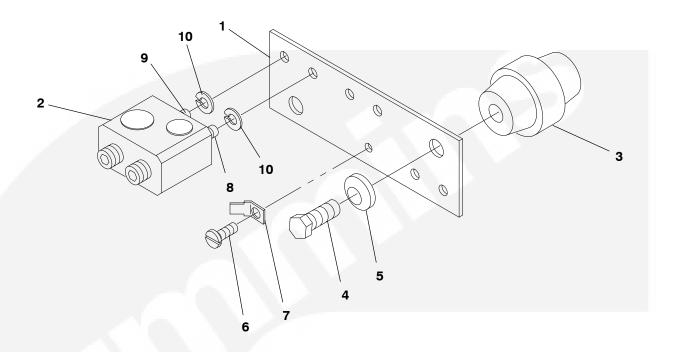
## Battery Charger 10 Amp, 24 Volt



## Battery Charger 10 Amp, 24 Volt

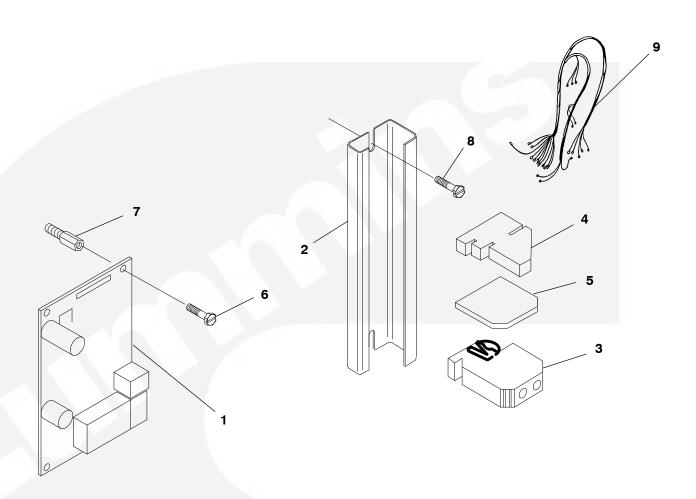
REF NO.		QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	319-0072	1	Wrapper, Charger – Battery	9	300-3244	1_	PCB, Charger - Battery
2	319-0073	1	Cover, Charger – Battery	10	305-0653	1	Rectifier, Bridge
			(Includes Silkscreen)	11	821-0040	4	Screw, Machine - Locking Head
3	302-1844	1	Ammeter, DC				(#10-32 x 5/16)
4	321-0237	2	Holder, Fuse (AC Input)	12	815-0845	8	Screw, Pan Head - W/ET
5	321-0104	1	Holder, Fuse (DC Output)				(#6-32 x 3/8)
6			Fuse	13	305-0781	1	Rectifier Assembly – SCR
			50 Hertz				(12 Volt) (Includes Parts
	321-0304-04	2	380/416/440 Volt				Marked *)
	321-0304-05	2	240 Volt	14	815-0539	6	Screw, Pan Head - W/ET
	321-0304-06	2	220 Volt				(#8-32 x 5/8)
			60 Hertz	15	870-0221	5	Nut, Hex - W/ET (#8-32)
	321-0303-02	2	600 Volt	16	870-0263	4	*Nut, Insulated (#8)
	321-0304-03	2	480 Volt	17	338-2223	1	Harness, Battery Charger
	321-0304-04	2	380 Volt				(Includes Parts Marked #)
	321-0304-05	2	240 Volt	18	323-1200	A/R	#Socket, Terminal
	321-0304-06		120/208 Volt	19	323-1302	A/R	#Pin, Terminal
7	321-0127	1	Fuse (15 Amp)	20	323–1318	1	#Cap, 6 pin
8			Transformer	21	323-1374-05	5 1	#Plug, 5 pin
			50 Hertz	22	364-0003	1	*Rectifier, Gate (SCR)
	315-0705	1	220/416/440 Volt	23	809-0035	4	*Screw, Sheet Metal - Round
	315-0703	1	380 Volt				Head (#8 x 3/4)
	315-0713	1	240 Volt	24	226-3554-02	2 1	Lead (Quantity Used as
			60 Hertz				Required)
	315-0701	1	120/208/240 Volt	25	862-0026-53	3 4	Nut, Hex – W/ET (M5)
	315-0707	1	380 Volt				
	315-0709	1	480 Volt				223 Wiring Harness
	315-0711	1	600 Volt	* – F	Parts Included i	n 305–07	781 Rectifier Assembly

## **Neutral Bar**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	337-2352	1	Bar, Neutral	7	332-2834	1	Tab, Terminal (.25)
2			Lug, Solderless	8	822-0085	3	Screw, Pan Head (1/4-20 x
	332-2704	3	300/400 Amp				5/8)
	332-2660	3	600 Amp	9			Screw, Pan Head
3	332-2512	2	Standoff, Insulator		822-0089	3	300/400 Amp (1/4-20 x
4	800-0049	2	Screw, Cap - Hex Head				1-1/4)
			(3/8–16 x 7/8)		822-0091	3	600 Amp (1/4-20 x 1-1/2)
5	851-0022	2	Spring, Disc - Conical (3/8)	10	850-0039	6	Washer, Lock (1/4)
6	815–0285	1	Screw, Machine - Round Head - W/ET (#8-32 x 5/8)				` ,

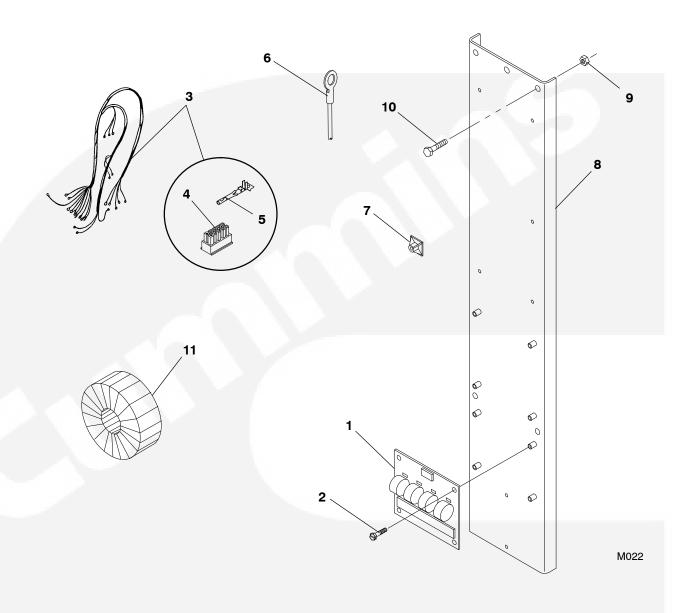
## **Network Module**



M020

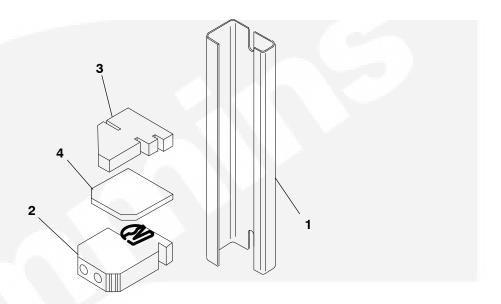
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	327-1542	1	Board, Printed Circuit –	7	870-2213-02	2 4	Standoff, Hex Thread (M3)
			Network Module	8	815-0955-03	3 2	Screw, Phillips/Hex Head -
2	332-2837-09	1	Rail, Terminal Block				GND (M4 x 10)
3	332-2836-01	2	Block, Terminal (Sectional)	9	338-3886	1	Harness, Network
4	332-2839	2	Bracket, End - Terminal	10		2	Battery - Lithium (3.0V)
5	332-2841	1	Plate, End – Terminal				(Purchase Locally)
6	815-0959-03	3 4	Screw, Pan Head (M3 x 0.5 x 8)	11	416-1049	2	Clip, Battery

## **Current Transformer Module**



REF NO.		QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	300-5254	1	Board, Printed Circuit - Current Module	11			Transformer, Current <b>300 Amp</b>
2	815-0959-03	4	Screw, Pan Head (M3 x 8)		302-1394	2	120 VÁC
3	338-3884-01	- 1	Harness, Current Module		302-1394	3	1 Phase, 2 or 3 Wire
			(Includes Parts Marked *)		302-1394	4	3 Phase, 3 or 4 Wire
4	323-1806-05	2	* Connector, Receptacle (10 Pin)				400 Amp
5	332-3606	20	* Socket, Contact		302-1809	2	120 VAC
6			Lead		302-1809	3	1 Phase, 2 or 3 Wire
	226-4794-03	1	15" (Marked J40-14, GND)		302-1809	4	3 Phase, 3 or 4 Wire
	226-4794-04	4	3" (No Markings)				600 Amp
7	332-2420	2	Mount, Cable Tie		302-1395	2	120 VAC
8	319-3943	1	Plate, Mounting		302-1395	3	1 Phase, 2 or 3 Wire
9	870-0212	4	Nut, Self-Locking (1/4-20)		302-1395	4	3 Phase, 3 or 4 Wire
10	800-0005	4	Screw, Cap – Hex Head				
			(1/4–20 x .75)	* – P	arts Included	in 338–38	84-01 Wiring Harness

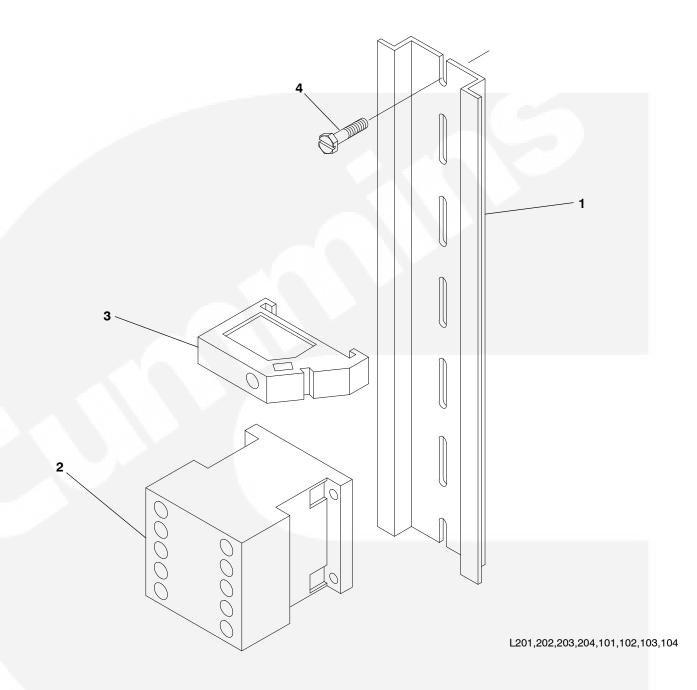
## **Terminal Block**



A037,K001,K002,K003

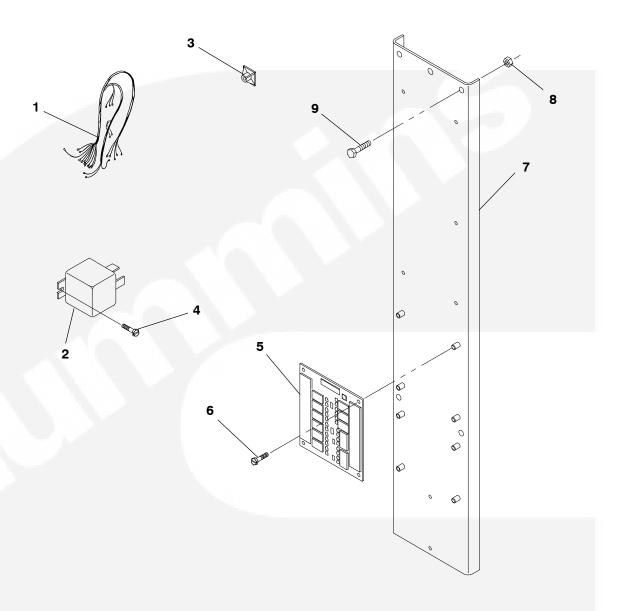
REF	PART	QTY	PART	REF	PART	QTY	PART
NO.	NO.	USED	DESCRIPTION	NO.	NO.	USED	DESCRIPTION
-	332-2837-09 332-2836-02	· -	Rail, Terminal Block Block, Terminal (Sectional)	_	332-2839 332-2841	2 1	Bracket, End – Terminal Plate, End – Terminal

## **Auxiliary Relay**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	332-2879-02	. 1	Rail, Terminal	3	332-2878	2	Bracket, End
2			Relay, Control	4	815-0955-0	3 2	Screw, Phillips/Hex Head -
	307-2873	1	12 VDC				GND (M4 x 10)
	307-2874	1	24 VDC				

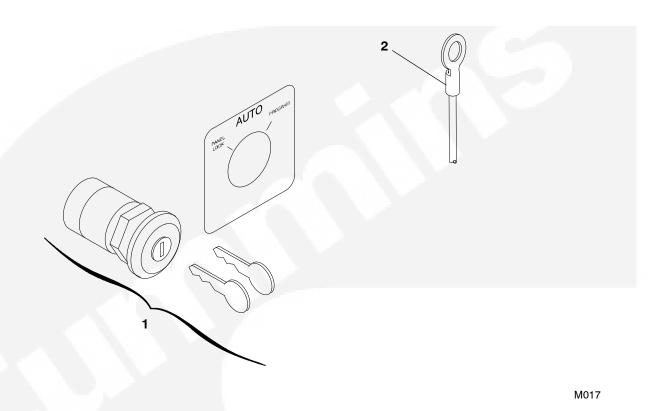
## Load Shed



M007,R027

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Load Shed	6	815-0959-03	3 4	Screw, Pan Head (M3 x 8)
	338-3876-01	1	All Except 600 Volt	7	319-3943	1	Plate, Mounting
	338-3876-02	2 1	600 Volt	8	870-0212	4	Nut, Self-Locking (1/4-20)
2	307-2929	1	Relay - 3PDT (12 VDC)	9	800-0005	4	Screw, Cap - Hex Head
3	332-2420	2	Mount, Cable Tie				(1/4-20 x .75)
4	815-0792-02	2 1	Screw, Pan Head (M4 x 8)				,
5	300-5152	1	Board, Printed Circuit - Relay Module				

## **Front Panel Security**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	308-1094	1	Switch, Selector	2			Lead
					226-4794-0	1 1	14" (Marked S20-2 - J27-5)
					226-4794-0	2 1	16" (Marked S20-2 - J27-11)

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